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AUTHOR Nikels, Kenneth W.; Hamm, Norman H.
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ABSTRACT

To test the mere exposure hypothesis, subjects were exposed to 20 slides of black and white stimulus persons. Based upon pre-experimental ratings, each slide had been initially assigned to one of four groups: high favorable black, high favorable white, low favorable black, and low favorable white. The experimental group, consisting of 25 white male subjects, received the exposure treatment; the control group did not. Analysis of variance of the pre- and post-test favorability ratings of the experimental group revealed a significant exposure effect for both levels of favorability. Results indicated a significant exposure effect regardless of race of the stimulus persons. The exposure sequence equally enhanced the interpersonal favorability of both racial groups. No significant changes were observed for the control group. The results of the present study agree with the response competition view of the mere exposure effect, but disagree with the adaptation and classical conditioning explanations. (Author)

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RACE, EXPOSURE, AND INITIAL AFFECTIVE RATING IN INTERPERSONAL ATTRACTION[1]

Kenneth W. Nikels
Kearney State College

and

Norman H. Mann
University of Nebraska-Omaha

A major task of social psychologists is to evaluate the assumption that interpersonal contacts produce improved intergroup interactions and attitudes. An impressive amount of correlational and experimental evidence has been presented by Zajonc (1968) supporting the "mere exposure hypothesis": that is, repeated presentations of a stimulus tend to enhance one's attitude toward it. Offered as correlational evidence is the relationship of word frequency and affective value. Using 154 pairs of antonyms, Zajonc reported that the preferred word was also the most frequently used word in 82% of the cases. Similarly, Johnson, Thomson, and Princke (1960) found that words with positive affect have higher frequency counts than words with negative affect.

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Stronger support for the mere exposure effect has been found by direct manipulation of the exposure variable. Zajonc systematically varied frequency of exposure and found enhanced attitudes for Turkish adjectives, Chinese characters, and photographs of college seniors. In the latter case, Zajonc presented

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[1] A paper presented at the 1973 meeting of the Midwestern Psychological Association

12 photographs of college seniors at different frequencies (0, 1, 2, 5, 10, 25) and found in nine cases that higher frequencies generated increasingly positive affective ratings. While the defining conditions are still incompletely understood, the mere exposure effect has been replicated and extended in a variety of laboratory situations (Harrison, 1968, 1969; Harrison & Zajonc, 1970; Saegert, Swap, & Zajonc, 1973).

Several recent laboratory investigations appear to qualify the mere exposure effect. Burgess and Sales (1970) and Perlman and Oskamp (1970) manipulated the context in which initially novel stimuli were presented, and both studies found that stimuli presented in a positive context became more positive with exposure, while stimuli presented in a negative context tended to become more negative with exposure. Similar results were obtained by Brickman and Redfield (1970). Using abstract art as stimuli, Rosenblood and Ostrom (1971) reported an exposure effect for initially unfavorable stimuli, but not for initially favorable stimuli. In contrast to Zajonc's prediction, they found a significant convergence effect, with negative stimuli becoming more positive with exposure, while positive stimuli became more negative with exposure.

Several conflicting theories have been offered to account for the overall exposure effect as well as the previously described context differences. Burgess and Sales (1970) account for their context differences with a simple explanation based on classical conditioning. They propose that the context of the stimulus

situation becomes conditioned to the stimuli themselves, and the strength of conditioning increases with increasing exposure. Hence, Zajonc's exposure effect is explained by the positive affect of the experimental situation being associated with the exposed stimulus, while the conflicting Perlman and Oskamp (1970) results are explained by the negative context of the situation being increasingly conditioned to the stimuli. However, the association explanation cannot clearly account for the Rosenblood and Ostrom (1970) results where initially negative stimuli became more positive, and initially positive stimuli became more negative. Rosenblood and Ostrom concluded that adaptation is the better explanation of their results. Accordingly, with increasing exposure of a stimulus, its favorability value approaches a subjective neutral point.

A third theoretical view of mere exposure stresses response competition (Harrison, 1968b). A number of antagonistic response tendencies are produced by the appearance of a novel stimulus, and the tension state resulting from response competition is associated with negative affect. Further exposure to the stimulus reduces the response competition, and as one response tendency achieves dominance, a corresponding reduction of negative affect, and attitudinal enhancement, occur.

The present study employed the exposure technique together with the utilization of stimulus persons to examine the influence of exposure on initially positive and negative black and white photographs.

Method

Subjects

Pre-experimental subjects were 20 Caucasian male undergraduate students enrolled in general psychology classes at the University of Nebraska at Omaha. Fifty Caucasian male general psychology students served in the exposure experiment.

Apparatus

Twenty monochromatic 2 x 2 slides of college seniors were taken from recent yearbooks. Instructions were presented to the Ss audibly on a Wollensak Stereo Tape Recorder. The slides were projected onto a screen by a Kodak Carousel Slide Projector. The stimulus exposure duration and the interstimulus intervals were electronically controlled by a slide-tape synchronizer. Ss were asked to record their ratings on an 11-point scale, ranging from Unfavorable (1) through Neutral (6) to Favorable (11).

Procedure

Pre-experimental. A pilot study was conducted to determine the five positive and five negative photographs for each racial group. Ratings were made on a pool of 25 Black and 25 white male slides. From this pool of slides the experimental stimuli were selected.

Experimental. The Ss were seated, in groups of approximately eight each, in the experimental room. Each S was presented the rating scale and asked to listen to the instructions.

During the pretest conditions, Ss rated their favorability toward each of the 20 slides. Each slide was exposed for a 2-

second duration, followed by a 4-second interval during which S recorded his favorability rating.

The second phase of the experimental procedure involved additional stimulus exposure for the experimental group. This exposure condition consisted of the presentation of 10 slide sequences, each sequence containing the 20 original slides. The control group was required to perform an inverted alphabet printing task for a period of time equivalent to the exposure process.

Following the exposure condition all Ss were given a second rating scale and required to rate their favorability toward the 20 slides. All aspects of this part of the experiment were identical in procedure to the pretest condition. At the conclusion of the experimental procedure the full purpose and implications of the project were discussed.

Results

The five ratings for each race by favorability category were totaled for each subject in calculating the dependent measure. Two repeated measures analyses of variance were computed to evaluate separately differences in pretest ratings and any changes produced by mere exposure. The former analysis consisted of a 2 (treatment) x 2 (race) x 2 (initial favorability) analysis of variance on the pretest measure, while the latter constituted a 2 (treatment) x 2 (tests) x 2 (race) x 2 (initial favorability) analysis on both the pre- and post-test data.

Pretest Analysis

Initial favorability. The pretest analysis revealed only a significant main effect for favorability category. The resulting F was highly significant ($F = 273.06$, $df = 1/48$, $p < .001$) and indicated that the slides did indeed represent distinct high- and low-favorability categories. Hence, the effect represents a cross validation of the favorability categories with a different sample of subjects than used in the pre-experimental procedure.

Exposure Analysis

Treatment x Tests. The mere exposure effect found in this study is illustrated in Figure 1.

Present Figure 1 about here

It is evident that the experimental group, which received the exposure condition, exhibited a larger pre- to posttest increase in affective ratings than did the control group. The interaction was significant at the .001 level ($F = 42.64$, $df = 1/48$). A simple main effects analysis revealed that the judged favorability increased from pre- to posttest for the experimental group ($F = 25.72$, $df = 1/24$, $p < .001$), while no significant change took place for the control group.

Treatment x Initial Favorability x Tests. As indicated in Figure 2, no convergence across tests took place for the high- and low-favorability categories. The figure presents graphically

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Present Figure 2 about here

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the nonsignificant interaction (F = 3.13, df = 1/48, p>.10). Inspection of graph A indicates an increase in favorability as a function of exposure was found for the slides initially rated as low in favorability. However, as graph B of figure 2 illustrates, exposure also produced an increase in affective rating for the highly favorable slides, a result contrary to the convergence hypothesis.

Discussion

The significant Treatments x Tests interaction, as illustrated in Figure 1, replicated and extended the "mere exposure effect" across the variables of race and initial level of favorability. Hence, exposure to an integrated slide sequence was a sufficient condition for the enhancement of interpersonal attraction.

From Rosenblood and Ostrom's (1971) study, it was expected that the ratings for the favorability categories would converge across tests. Such a prediction is consistent with an adaptation level theory of mere exposure. However, the results of the present experiment appear more consistent with a response competition theory. Regardless of initial level of favorability, exposure functioned to enhance interpersonal attractiveness. That a large and significant attitude change was found for the low-favorability categories provides negative evidence for the association theory as postulated by Burgess and Sales (1970).

Also, the parallel curves as depicted in Figures 2A and 2B support the recent findings of Zajonc, Shaver, Tavris, and van Kreveld (1972), as well as those of Saegert, Swap, and Zajonc (1973).

The difference between the present results and those of Burgess and Sales (1970) and Perlman and Oskamp (1970) may be a product of the different stimulus materials used. Both Burgess and Sales and Perlman and Oskamp used stimuli that varied in favorability in terms of the context of the situation. The present study varied favorability by using attractive and unattractive stimulus persons, while holding the context of the picture constant. The contrasting results of Rosenblood and Ostrom (1971) may be a function of their use of abstract art as stimuli.

An important result not previously mentioned was the absence of a significant Treatment x Tests x Race interaction. Regardless of race of slide, exposure served to enhance the interpersonal attractiveness of the stimulus individuals. This conflicts with the results of Perlman and Oskamp (1970), who found that Negro photographs displayed smaller effects of positive context exposure and greater effects of negative context exposure.

Generalizing the results of the present study to real-life interaction must be made with caution. Obviously, the dimensions of mere exposure are not totally understood, and the context of the interpersonal interaction cannot be ignored.

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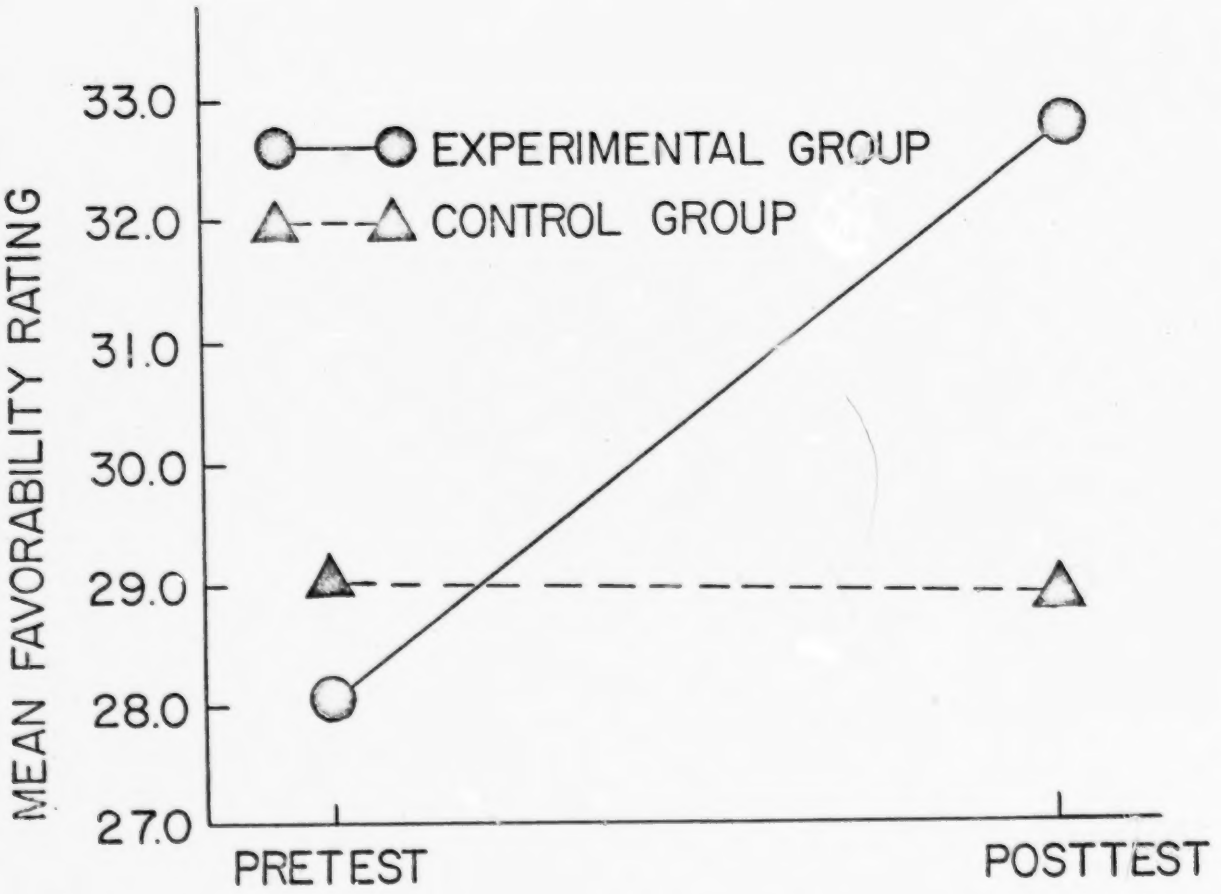

Fig. 1. Mean favorability as a function of exposure.

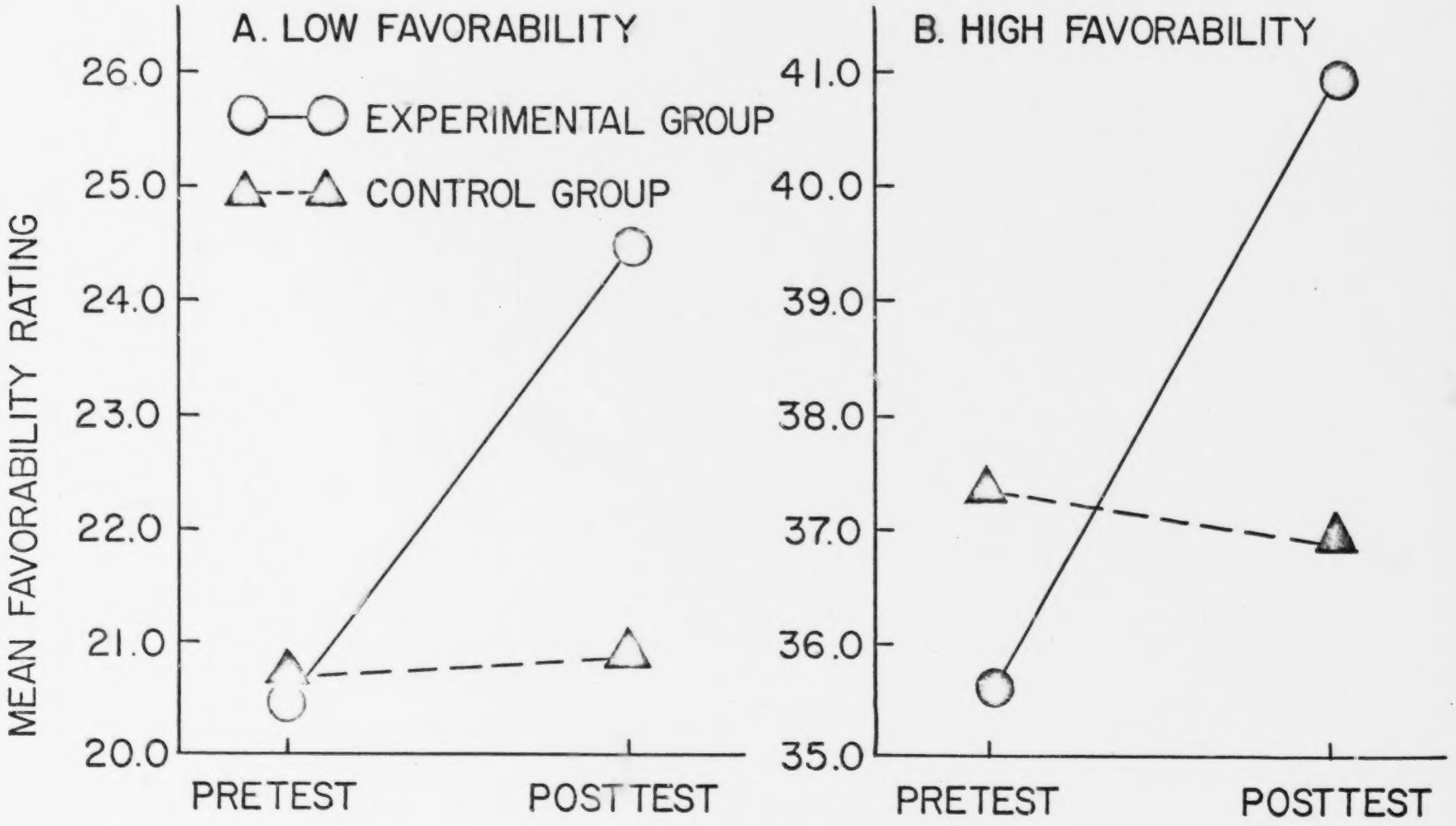

Fig 2. Favorability rating as a function of exposure and initial affective value.